THE HOME OWNER'S BLUE BOOK OF

Fenestra

BONDERIZED STEEL CASEMENT WINDOWS

Fenestra Introduces

Bonderized Steel Casements for Protection Against Rusting

PAINTED FOR THE LAST TIME
IN A LONG TIME

Now Fenestra introduces Bonderizing as part of its New Finishing Process which is destined to effect important savings in window maintenance costs for Owners, Architects and Builders.

"EFFECTIVE PROTECTION"

Parker Rust-Proof Company, licensor of the Bonderizing process to the manufacturers of Fenestra windows, says: "The Detroit Steel Products Company now adopts a new finishing process for Fenestra windows, providing effective protection from rust. The metal is protected from moisture, rust is inhibited, the finish lasts longer, maintaining finer appearance and cutting down repainting costs."

In Fenestra's New Process, the combination of Bonderizing and a Special Baked-On Priming Coat of Paint increases the life of Primer 3 to 5 times. Bonderizing holds the paint, and protects the outward finish against spread of rust in event of abrasion. Primer provides a stable base for the finish coats of paint.

PLAIN STEEL AFTER 700 HOURS' SALT SPRAY TEST

BONDERIZED STEEL AFTER 700 HOURS' SALT SPRAY TEST

Above photographs show the comparative rust-resistance of two Steel Panels. One was Plain Steel painted; the other, Bonderized Steel painted. Both were cross-scratched deep into the metal. Both were then subjected at the same time to salt spray for more than 700 hours. Note that on the Plain Steel specimen the rust spread extensively beyond the scratches, under the paint. On the Bonderized Steel sample, observe that the rust was closely confined to the metal exposed by the deep scratches, and did not creep appreciably under the edges of the paint.

Fenestra's Advanced Process Means New Savings in Window Upkeep—for Thousands of Home Owners

Fenestra Residence Windows

Through the window of the present
All my life must come to me!
Freedom, happiness and love, and
Nature's beauty I shall see
Only as they near my casement;
Then my heart shall bid them stay,
For God's blessings always enter
Through the window called Today.

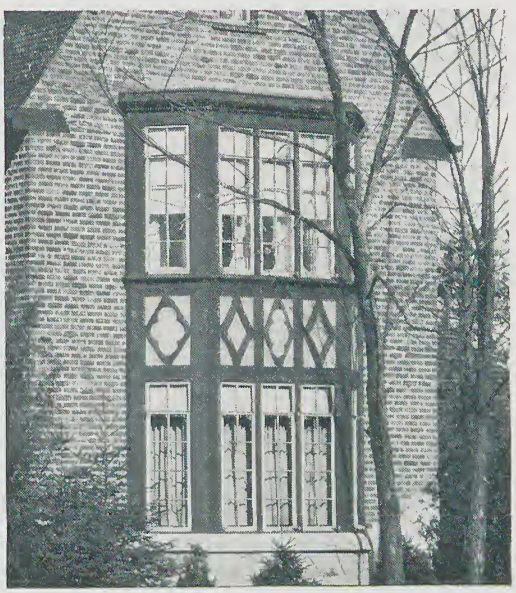
—O. Lawrence Hawthorne

You should give the windows of your new home more than passing thought, for they can be made to add much to your future pleasure and comfort.

Viewed from the outside, windows can affect the design and character of the entire building. They are the features which give expression to the home. Their shape, size and location can make a house look prim or stately, hospitable or cozy. Windows make the first impression on the passerby in the street or the visitor beside the hearth.

Viewed from the inside, each window frames a picture, charming in a way that wall-hung pictures never fully equal, for the varying scenes are painted by Nature in the bright colors of the out-of-doors.

Each window frame a living picture



Tall and stately windows

In Large Homes and Small Ones

C. H. Dent, Englewood, N. J., Owner
Polhemus & Coffin, Architects

Henry Barkhausen, W. Palm Beach, Fla.,Owner
Treanor & Fatio, Architects

H. T. Riter, Wynnewood, Pa., Owner
Wallace & Warner, Architects

Home in Scarsdale, New York
W. Stanwood Phillips, Architect

Stone

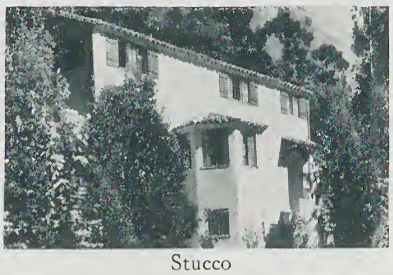
Brick

Left Above: Daniel Lipsky, Great Neck, N. Y., Owner. A. W. Coote, Architect

Left Below: House in Birmingham, Mich. Designed by Henry J. Rohl, Jr.

Right Above: Mrs. F. G. Mead, Berkeley, Calif., Owner. House Beautiful Prize Home

Right Below: Allison D. Housley, Wellesley, Mass., Designer



Stucco

Shingle

How Windows make Houses "Livable"

If you have an architect—and you should have one by all means—he will know many of the finer points about windows from long experience and he will welcome suggestions from you that show him your window preferences and the results you hope to obtain. If you do not employ an architect, that is all the more reason why you should study the design and arrangement of your windows very carefully.

Tall, narrow windows tend to make a house look high, while wide, low windows tend to make it look broad. Extremes in either direction usually should be avoided.

The tops of your windows usually should be several inches below your ceiling. This gives a much better effect than to carry the windows up tight against the ceiling. Also, try to keep the tops of your windows on a line. If the window heights must vary, try to let the variation come in the height of the sills above the floor. This is not always possible but it is a good thing to have in mind.

Group your windows. Place two or three or even four or five together, side by side. Single windows sometimes are hard to space nicely and if

you use enough of them to give proper light and air they reduce the amount of free wall space and often make it hard to place the larger pieces of furniture, such as davenports, pianos and book cases, just where you want them.

The height of window sills above the floor is something to consider. There is no set rule, but 24″ to 30″ is a good height if you plan to sit near the windows. This allows space under the window for a radiator or a window seat or both.

Always try to place your heating units—radiators, warm air registers, etc.—under or near the windows wherever possible, to warm the air that comes in contact with the glass.

Don't forget that the lower part of any window admits light to a small portion of the room near the window but the upper portion of the window lights the back of the room and therefore is of equal or even more importance. This is worth consideration when planning shades and draperies.

Remember that cross ventilation in a room always is desirable. Therefore try to place your windows so there will be a sweep of air across every room. If your room is in a corner of the building, even a small window in each of the two outside walls is better than one large window in one wall and no ventilation whatever in the other.

Residence windows usually are of the Double Hung Type or the Casement Type. Double Hung Windows slide vertically and usually are counter-balanced by weights concealed in the jambs. Casement Windows are hinged at the jambs to swing in or out. Out-swinging Casements are much preferable as In-swinging Casements are hard to make tight against driving storms and the in-swinging portion tends to interfere with draperies. In-swinging Casements have screens on the outside and Out-swinging Casements have screens on the inside.

Steel Casements made by the Detroit Steel Products Company are called "Fenestra" which is the Latin word for "window." Germans call it "Fenster" and the French call it "Fenêtre."

Naturally, we think Fenestra Casements have many advantages for the home owner and builder. These advantages we have tried to explain on the succeeding pages. On page 23 you will find evidence that some other people, whose opinions are well worth while, agree with us.

Adapted to Every Room in the House

Living Room

Dining Room

Breakfast Room

Some people say, "I want Fenestra Casements in my living room, but I'm not just sure how they will work out in the other rooms in my house."

The pictures on this page show Fenestra Casements used in every type of room. Other arrangements and adaptations are possible of course, but the ones shown are fairly typical.

There are curved headed windows for the stair hall and casements of varying height and width for the sun room; "studio" types for the den; low, broad windows to use over the kitchen sink or above the fireplace mantel; tall, narrow types for closets, bathrooms and such places.

Stair Hall

One particular type is handy for use in dormers, breakfast nooks and baths. This type has two swing leaves, each leaf just one pane wide.

The pictures on page 8 show how various types of Fenestra Casements look from the outside when installed in Bays, Oriels, Dormers and in various groupings.

A "Dormer Window," of course, is a window in a small gable which rises from a sloping roof. A "Bay Window" is one that is set in a structure, angular in form, projecting from a wall and extending to the ground as distinguished from an "Oriel" which is a similar structure but carried on brackets.

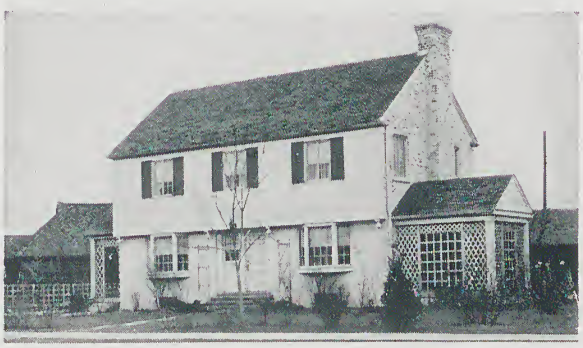
Sun Room

Bedroom

Kitchen

Delightful in Colonial Designs

Owner, A. M. Lerner, Orange, N. J. Philip N. Stern, Architect



Owner and Designer, B. E. Rockoff, Detroit, Michigan

Residence in Washington, D. C., Dillon and Able, Designers

Owner, R. H. Cooper, Yonkers, N. Y.
Westchester Hills Homes Corp., Designers

Owner, George V. Christie, Purchase, N. Y.
L. S. Beardsley, Architect

Residence in Washington, D. C., A. L. Aubinoe, Architect

Owner, J. A. Tennant, Houston, Texas. John F. Staub, Architect

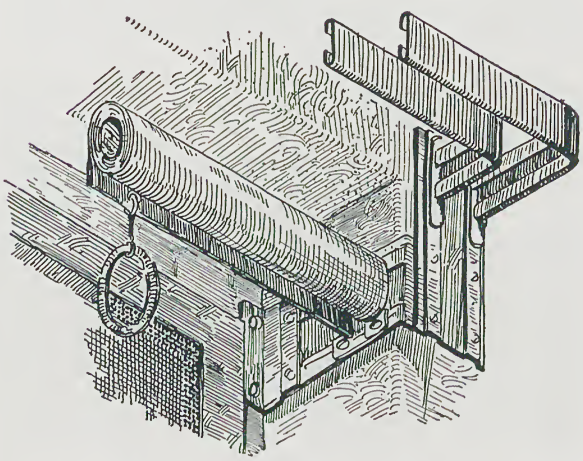
Residence at Maplewood, N. J.
Lombardy Construction Co., Designers

Easy to Shade or Drape Pleasingly

The scheme of window draping for any room should depend much on the character of the room itself. Usually the problem is somewhat simplified by the use of Fenestra Casements because the small panes of glass and the ornamental hardware are themselves decorative and harmonize readily with any treatment of wall space or window opening.

Roller shades and drapery brackets usually are attached to ordinary windows by screwing them to the surrounding trim or plaster. But Fenestra Casements can be drilled near the head at both jambs to accommodate any standard bracket so that the draperies and shades may be hung from the window frame itself.

The sketch below illustrates a combination



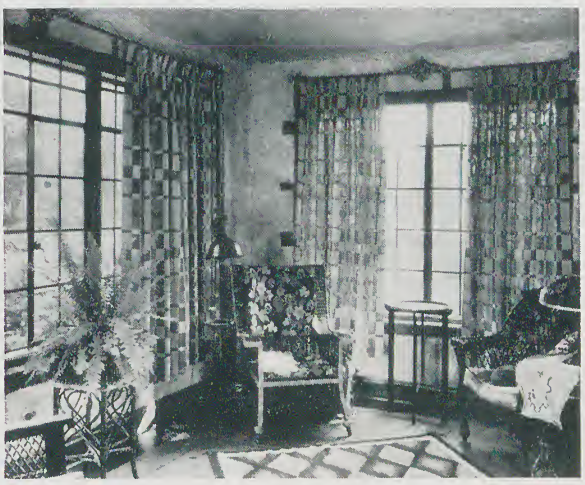
Shade and drapery bracket suggested for Fencraft and Fenwrought Casements

With a Variety of Charming Results

bracket which may be purchased locally to support shades, glass curtains and overdrapes.

The pictures on these pages and on page 4 suggest various modes of formal and informal draping. The variety possible is almost endless and it is astonishing what a change in window appearance can be created by changing the draperies,—printed or hand blocked linen in one room,—formal lambrequins in another,—bright valances or figured chintzes in a third.

Note the quaintness of the early American bedroom in the lower right hand corner with its wide window made to appear even wider by permitting the drapery to overhang the wall on either side. A straight valance, patterned overdrapes and simple net curtains tied back, increase the room's apparent severity.



These Casement Groupings are Effective

Oriel

Colonial Dormers

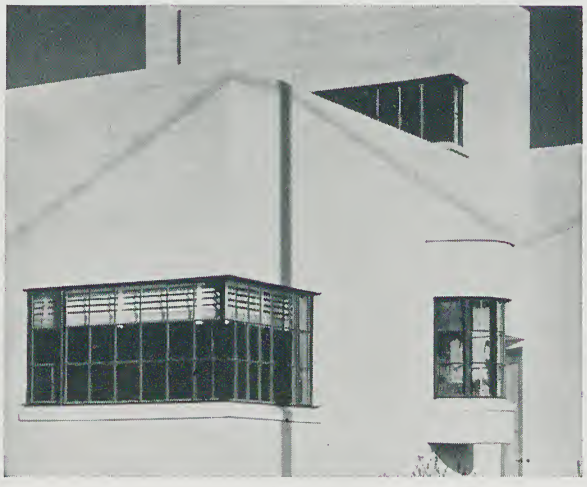
Bay

High and Narrow

Side Lights

Uneven Sill Heights

Below: Round the Corner



Below: Short and Wide

Some Fenestra Casement Advantages

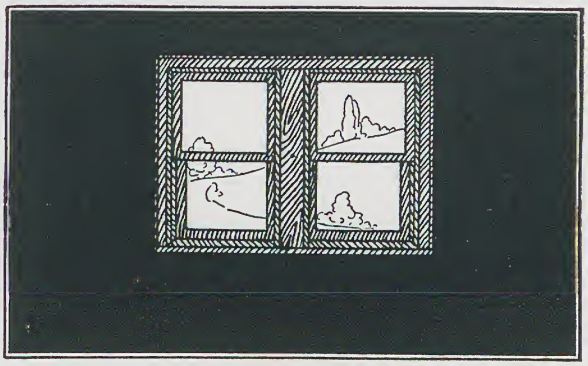
1—Strength

Fenestra Casements are strong. They are designed from solid rolled, vertex profile, steel sections. They do not swell, shrink, split or splinter. They are tough, sturdy and stand up under hard usage.

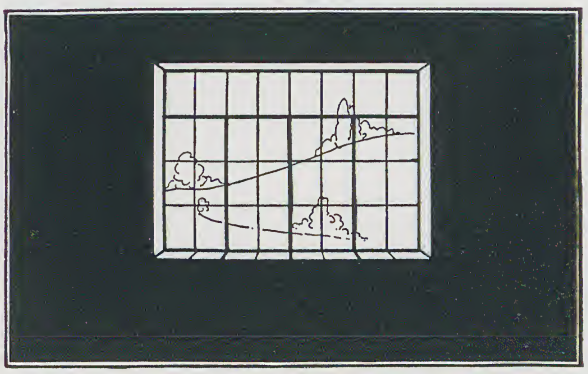
2—Admit More Light

They admit more light. Compare a Fenestra Casement—sash and frame—with the ordinary type of Double Hung Window where the overall dimensions are the same and invariably you will find that the Fenestra Casement has a larger glass area. This is because the stiles and rails of the ordinary window must be fairly wide to have the required strength while Fenestra sections have the inherent strength of solid rolled steel and can be made comparatively narrow.

In addition to this, the usual type of Double Hung Window requires weights at the jambs to counterbalance the weight of the sash and these weights must be enclosed in boxes which are always provided for in making up Double Hung frames, so that the actual area of glass per frame is much less than in Fenestra Casements which employ no weights. (See page 18.)



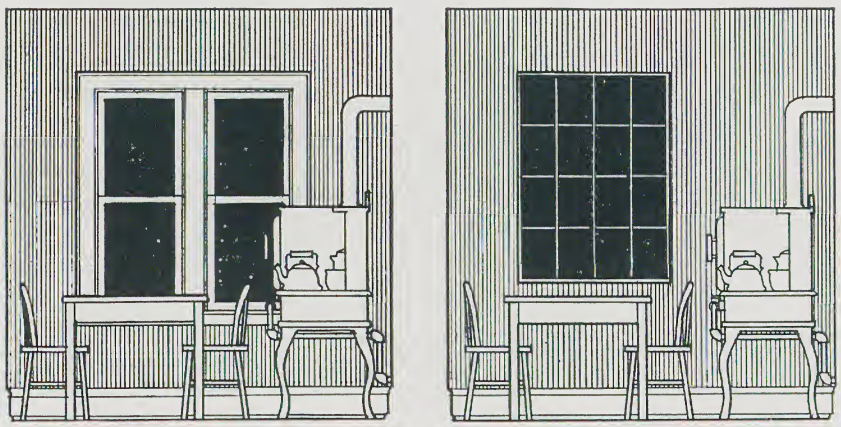
Light area of an ordinary Double Hung Window



Light area of a Fenestra Casement

3—Conserve Wall Space

In modern construction, wall space is at a premium. In bedrooms, kitchenettes, and such rooms, there are areas where as much light as possible is needed but where ordinary windows in sufficient number to give good light will occupy so much wall space that little room is left for furniture. In all such cases, the narrow frames of Fenestra Casements are a big advantage.



Left—Ordinary Double Hung Window. *Right*—Fenestra Casement. Both have the same glass area and are located the same distance from the ceiling and from the left hand wall. Which leaves more free wall space for furniture?

In some states, the building codes determine a definite ratio of glass area to floor area for every room in the house. Fenestra's large area of glass helps tremendously in meeting requirements such as these.

4—Burglar Protective

Fenestra Casements provide burglar protection. The 8″ x 12″ glass lights are not large enough to permit any intruder to enter by breaking a window and two

Surprising Ventilation Features

locks must be unlocked before the swing leaf can be opened from the outside.

5—Fire Resistant

Fenestra Casements are fire resistant. Steel does not burn. Insurance companies often give lower rates on buildings equipped with steel casements. Fenestra Casements are installed with a minimum of wood trim and may be installed without any, thus decreasing the fire hazard still further.

6—Ventilation Control

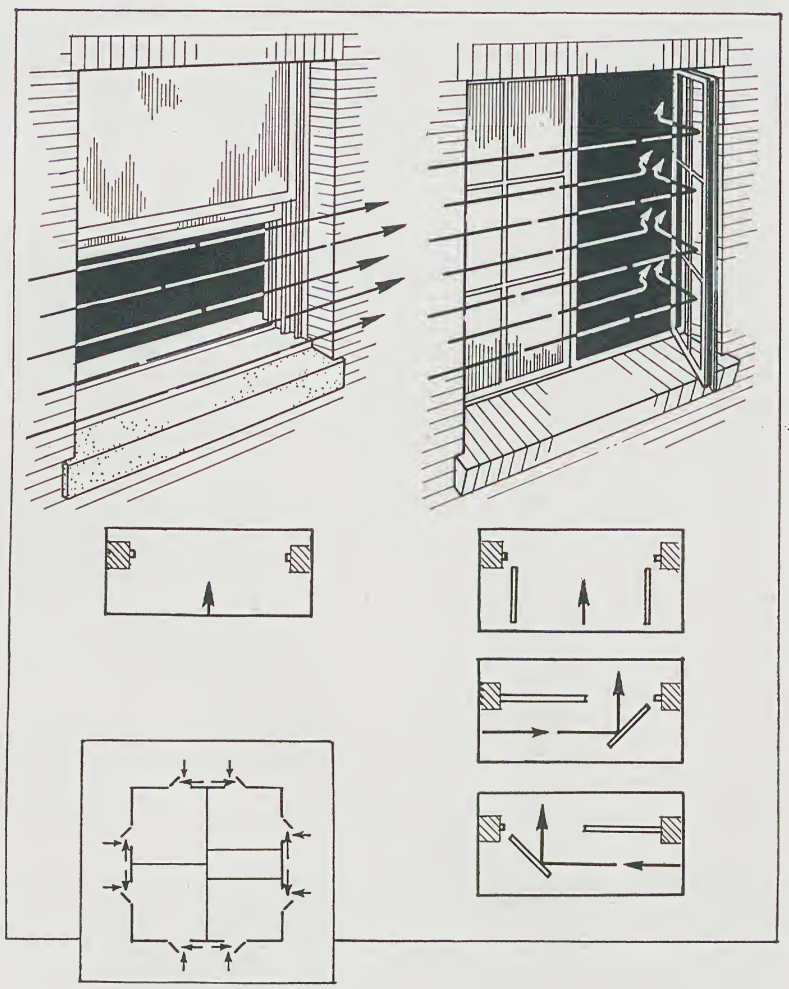
Fenestra Casements provide better control of ventilation, because their uniform free and easy operation in all seasons and in every kind of weather reduces to a minimum the amount of effort necessary to open and close the window, whereas the usual Double Hung Windows frequently stick and require unusual effort.

People who would sit in a draft or in an overheated room rather than tussle with a window that is hard to move, find that Fenestra Casements, operating almost at a finger's touch, are conducive to healthful temperatures.

By using a little care and forethought at the time the house is built, the designer can specify Fenestra Casements with exactly the amount of ventilating opening he desires for each room. He can secure, if he so desires, even 100% opening whereas the usual Double Hung Window never supplies more than 50% opening under any condition.

But even more important from a ventilating standpoint is the fact that Fenestra Casements may be set to catch the breeze blowing from any one of three directions.

Double Hung Windows admit only those breezes that blow perpendicularly or nearly perpendicularly to the face of the sash. Breezes blowing parallel to the face of the sash pass by and very few enter. But Fenestra Casements catch not only the breeze that blows perpendicularly but, if the swing leaves are open at an angle, they intercept and deflect into the room, even the breeze that blows parallel to the face of the window. (See sketch above.)



It is an astonishing fact not generally known, that even where single leafed Fenestra Casements are used the breezes from any one of four directions may be admitted to any room that has cross ventilation. All that is necessary is to make sure

Easily Washed From Inside the Room

that the casements are so specified that when installed the hinge jambs will be toward the nearest outside corner of the building. Note how this works out as shown by the small sketch, page 10.

7—Easy Operation

Fenestra Casements never swell, shrink, warp or stick. Hence their operation is always uniformly easy and trouble-free even though the windows may have been newly painted.

8—Weathertight

The swing leaves on Fenestra Casements meet the frame with a wide, flat overlap both outside and inside. Swing leaf and frame are drawn tightly together in a flat, double contact by the cam action of the locking handle. Thus is created one of the best insulation and weather protective

mediums known to engineers—a trapped air space all around the swing leaf opening.

Furthermore, all Fenestra Casements, properly installed, are set in a bed of mastic (supplied free). This mastic applied between the window frame and the building construction actually seals the window into the wall, guards against leakage or drafts around the edge of the opening.

Insulation of this kind is almost impossible to secure with ordinary Double Hung Windows, due to the difficulty of sealing the cracks around the weight boxes which cannot be reached with mastic. Tests conducted at the University of Michigan showed that a Fenestra Casement was more weathertight than a Wood Double Hung Window, weather-stripped.

9—Easy Washing

Fenestra Casements are easy to wash on the outside from within the room. Extension hinges swing the sash away from the frame as the casement opens, leaving a 4″-wide opening at the hinge jamb through which the window cleaner can extend her arm without difficulty and reach the outside of every glass light without leaning far out or sitting backwards on the sill.

10—Inside Screens

Fenestra "Screened" Type Casements include, unless otherwise specified, flat, steel framed, bronze mesh, inside screens which remain stationary in the opening, the window being opened, closed and locked through the screen but without touching it. "Standard" and "Economy" Type Casements accommodate metal, inside, swinging screens. See page 16.

11—Inside Storm Windows

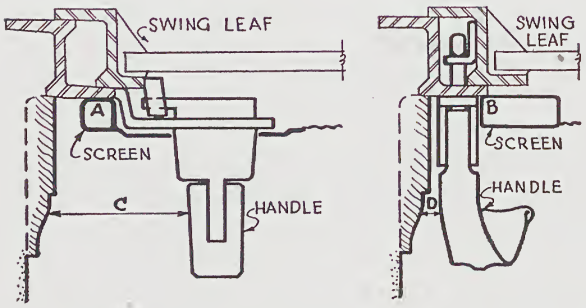
Fenestra Inside Storm Windows are easily installed on Fenestra Screened Type Casements. They eliminate condensation and frost under all ordinary circumstances; reduce heat loss through the windows 60%; effect a saving in fuel. See page 17.

12—The Locking Handle

Some people ask why we have an opening in the screen and in the glass of the storm window to accommodate the casement handle. They suggest it might be easier to design the handle operating OUTSIDE the screen and storm window frames, leaving the screen mesh and the glass "unpunctured."

The accompanying drawings give the answer. Any handle operating OUTSIDE the frame of the screen or storm window is crowded for room. Therefore, it must be light in construction, its motion must be up and down and it becomes more of a Latch than a Lock. At the jamb, it crowds the screen, preventing adequate overlap (see B in diagram at right, page 12). It also crowds the plaster or inside trim (see D in diagram at right, page 12) making operation inconvenient. When two swing leaves meet in the center, two handles are

Modern Windows are Good Insurance



required, also two screens and two storm windows.

But the Fenestra Handle is attached to a heavy steel bracket which permits it to protrude THROUGH the screen or storm window. Plenty of room is allowed for positive, sidewise locking action. The screen and storm window have wide overlaps (see A and C in diagram at the left). When two swing leaves meet in the center, one handle locks them both. Only one screen or one storm window is required to cover both swing leaves.

13—Fenestra Steel Casings

Fenestra Steel Casings are supplied where specified, on stock type single units of Fenwrought Casements. These casings eliminate all inside trim, stools and aprons; make plaster returns unnecessary. They form a smooth, durable, non-inflammable interior finish and save time and expense in window installation. See Page 13.

14—Already Painted

The flat, gray, priming coat with which all Fenestra Casements are painted before shipment provides an excellent base coat. A finish coat may be applied at any time in colors harmonizing with the color scheme of any room.

15—Standard Shade Brackets

Shade brackets are not supplied with Fenestra Casements but casements may be drilled at the top of each jamb member to accommodate standard shade brackets which may be purchased locally. Thus, shade and drapery supports may be attached to the casements themselves instead of to the surrounding woodwork or plaster.

16—Architectural Advantages

Fenestra Casements insure several distinct architectural advantages as compared to the usual type of Double Hung Windows:

(1) Due to the elimination of weight boxes, a wide variety in the inside treatment of window openings is possible. (2) No broad, heavy, horizontal line is prominent at or near the center of the window as in the case of Double Hung Windows. (3) All glass in the Fenestra Casement is in the same plane, a feature impossible to secure in Double Hung Windows where one sash must, of necessity, slide past the other.

17—Glass is Inexpensive

Small lights of glass are less expensive than large lights, whatever grade of glass is used. Fenestra Casements with interior muntins effect a glass economy, not only in first cost but also in maintenance and replacement, as compared to the large glass lights commonly used in Double Hung Windows.

18—Possible Economies

Several worth-while economies are possible with the use of Fenestra Casements: (1) The first cost is reasonable; (2) Installation costs are minimized since the casements reach the job complete with no extra material to buy; (3) Interior trim is eliminated at the head and both jambs; (4) The cost of weather-stripping is eliminated.

19—Minimum Repairs Needed

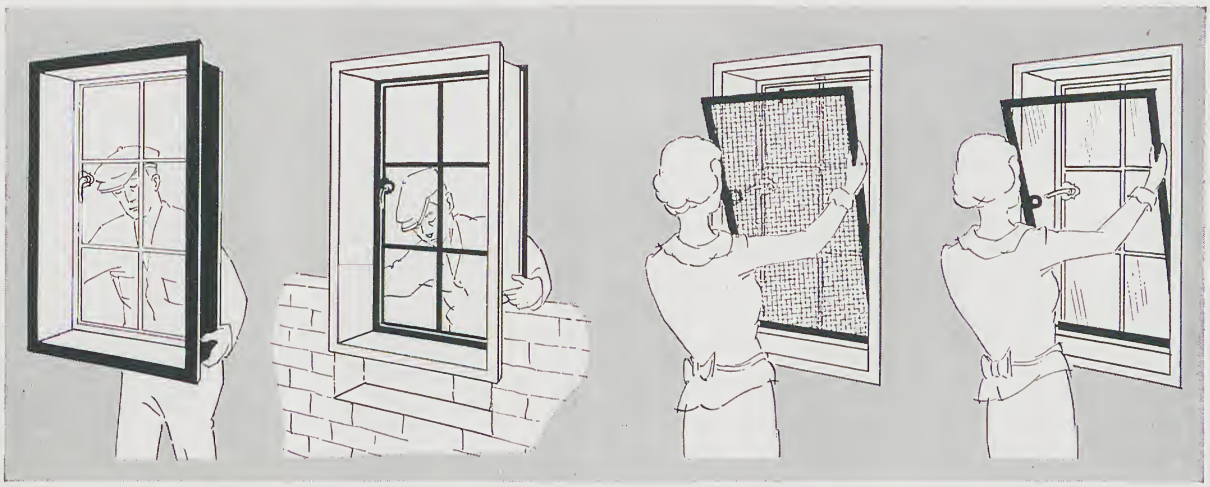
Fenestra Casements require minimum repairs. No one ever needs to refit steel windows because steel sash do not warp or swell and never stick from excess paint or changes in atmospheric temperature or humidity. No cords fray out or break. No weights drop off. Muntin bars do not split or splinter.

20—Building Insurance

What better insurance could any one ask for the safety of his investment? If you ever want to sell your home, these modern windows will prove to be a feature which draws prospects. They insure you against the decline in popularity and the speedy obsolescence which attend the use of materials that are declining in public favor.

The building of a home often is one of the largest investments a man makes during the course of his lifetime. How important then, to select carefully, modern, permanent windows that will last as long as the building stands and help increase its worth!

The Complete Fenestra Window



1—Steel Casing 2—Steel Casement 3—Inside Screen 4—Storm Window

These four units combined, form the complete Fenestra Summer and Winter Window. The Casings, if used, must be purchased and installed with the Casements, but the Inside Screens and Inside Storm Windows may be purchased and installed at any time after the Casements themselves have been in use. It is well, however, to specify the Casements "prepared for inside storm windows" so that if and when the latter are desired they can be installed with minimum labor and expense. The advantages of each of these four units are given on the following pages.

Fenestra Casings

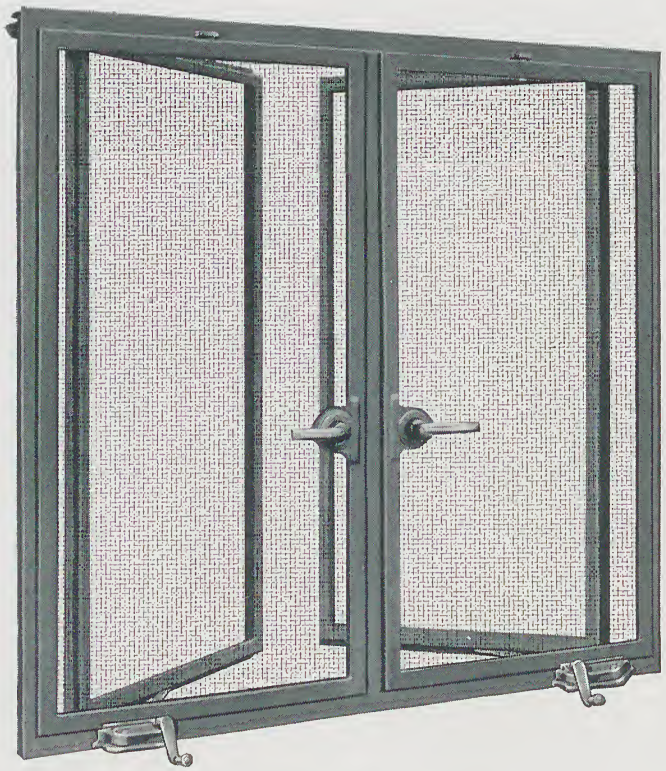
Fenestra Casings of 18-gauge steel are designed to attach around the perimeter of Fenestra Casement single units and extend $4\frac{5}{16}''$ to the inside, plastered face of the wall. Casement and Casing are installed as an assembled unit and the Casing takes the place of either interior "trim," stool, and apron or plaster return, stool and apron.

Being of steel, the Fenestra Casing will not burn. It will not warp, swell, shrink, or discolor. It simplifies the window installation, minimizes erection costs and eliminates plastering troubles around the windows. It provides a smooth, durable, all-steel finish which is practically indestructible. It eliminates the time, labor and expense of mitering and fitting wood casings, back-bands and mouldings. It can be installed at a cost comparable with that of a plaster return with wood stools or wood casings and stools.

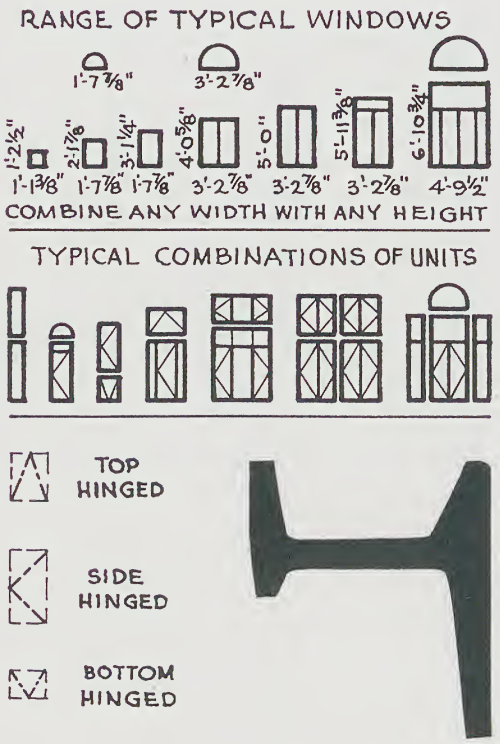
The inside face of the steel casing is $1\frac{1}{2}''$ wide and is formed into a plaster lock at its outer edge. Usually the plasterer brings his finish coat up directly against and flush with the casing, thus simplifying his work materially.

Of course the Casing may be painted to harmonize with any scheme of interior decoration or to match the inside surfaces of the Casement itself.

The Fenestra "Fencraft" Casement



Screened Fencraft Casement



Head Section

Fenestra Casements usually are made in two classes of construction. One class,—shown on this page,—is called "Fencraft" and has sections 1¼" deep from front to back. The other, shown on page 15, is called Fenestra "Fenwrought" and has sections 1" deep. (Where specified, Fenestra "Custom Built" Casements with 1½" sections can be supplied.)

The swing leaves usually open out, but can be designed to open in if so specified. Fenestra Flat Screens usually are supplied but the casements may be had in "Standard" types with swing screens if desired.

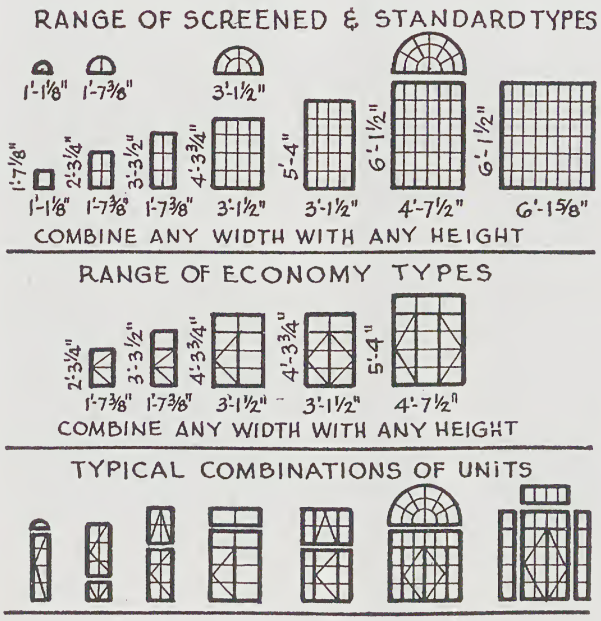
Often, these casements are supplied with interior bars (muntins) which divide the window into many small lights of glass, but usually they are shown with these bars omitted so that the windows may be glazed with large panes of plate glass or with leaded glass panels. Glass is not furnished.

Curved heads and transoms are available and the various units may be combined side by side or one above another by the use of mullions so that the variety of combinations and dimensions is almost unlimited. Some of these interesting variations are shown above.

Hardware is pleasingly designed and may be had in a number of attractive finishes. Screened types are equipped with locking handles and sill operators but "Standard" types have locking handles only as the hinges are so designed as to hold the swing leaves in any desired position without the aid of sill operators.

Fencraft Casements are made in more than 40 standard types and sizes. Swing leaves usually are limited in number,—not more than two side hinged leaves in any one unit. The smallest Fencraft unit is 1′ 1⅜" by 1′ 2½"; the largest standard unit is 4′ 9½" by 6′ 10¾". The standard dimensions and designs may be used to build up almost any effect desired, as shown above.

Fenestra "Fenwrought" Casements

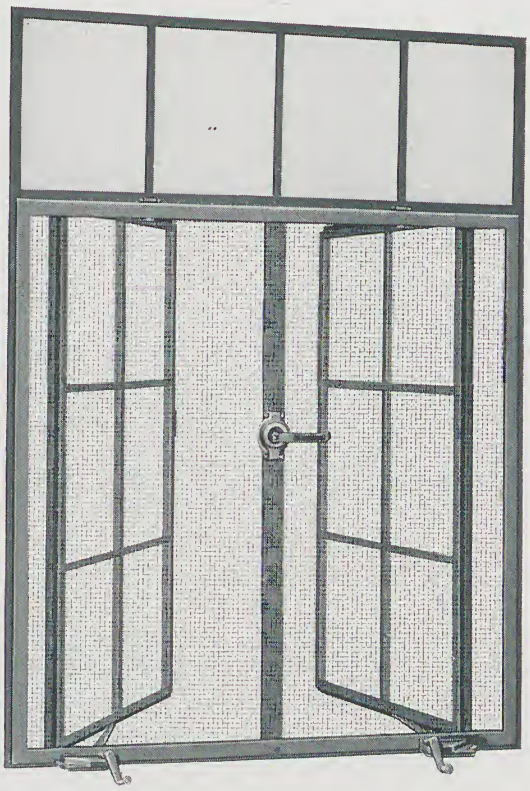


Fenestra Fenwrought Casements are manufactured in "Screened," "Standard" and "Economy" Types from solid steel sections 1″ deep, from front to back.

Screened Types have a Locking Handle, a "Roto Adjuster" at the sill and a fixed inside screen. Rotating the adjuster inside the screen opens the swing leaf outside the screen. Lights are about 8″ x 12″.

Standard Types have a Locking Handle, an inside hinged screen, and friction hinges which make a sill adjuster unnecessary. Lights are about 8″ x 12″.

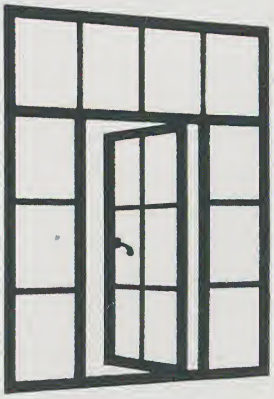
Economy Types are limited in number and have glass lights about $16\frac{5}{16}$″ x 12″. The swing leaf usually is one light below the head. Otherwise they are similar to Standard Types.



Screened Fenwrought Casement

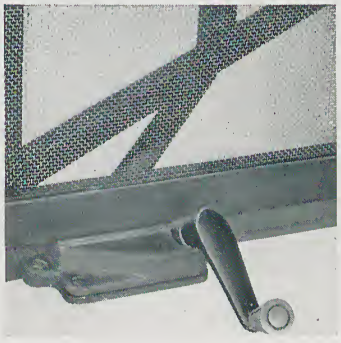
Interior bars in all Fenwrought casements may be partly or almost wholly omitted to allow for leaded glass panels or Spanish or ultra-modern effects.

Transoms and sill ventilators are available (see Tiltin Windows). Swing leaves are never more than 2 lights wide.



Standard Fenwrought

Economy Fenwrought



Roto Adjuster

"Tiltin" Windows Have Advantages

Fenestra Tiltin Windows are one light high and vary in width and are designed to attach at the sill of Fenwrought Casements.

The Tiltin ventilator is designed to tilt in about 4″ at the top without any appreciable opening at the sill. In this position, the ventilator acts like a wind guard similar to those used on office windows.

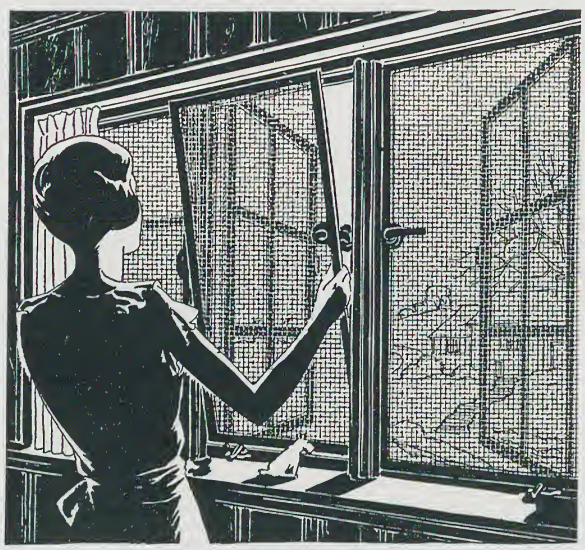
Tiltin Windows are especially useful in bedrooms when moderate ventilation without direct draft is needed. The ventilators, partly open, direct air currents up over the heads of sleepers.

The same wind guard feature is an advantage in libraries, play rooms, sewing rooms and dens, the Tiltin ventilator preventing sudden gusts of wind from disarranging papers, patterns, games or materials.

Of course, these windows may be opened farther than merely 4″ at the top. In fact they may be opened to a full 90 degrees so that the entire space is 100% open. This helps the ventilating problem materially if the weather is warm.

Made in sizes to fit any standard type of Fenwrought Casement.

Fenestra Flat Type Inside Screens



Fenestra Flat Type Inside Screens have reinforced, cold rolled and rust-proofed steel frames and 16-mesh, oxidized bronze wire cloth. They fit Screened Type Casements, lying flat against the casement frame on the inside and covering only the ventilating part of the window. They are held by clips and can be set in place or removed in a jiffy without tools.

Although screens may be left in place the year round, if removed, they need not be numbered or marked as any casement will accommodate a screen from any other casement which has the same sized swing leaf and locking handle on the same side.

Each Flat Screen is designed to fit over or around the casement locking handle and sill adjuster so that the swing leaf on the outside may be opened, closed and locked from the inside without touching the screen.

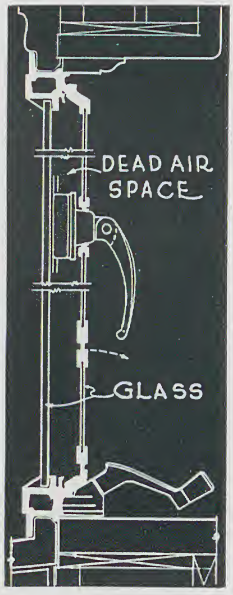
"Standard" and "Economy" Type Casements accommodate swinging screens on the inside, hung on top and bottom studs. Screen frames are cold rolled, bonderized steel tubes with 16-mesh bronze wire. All swinging screens must be opened to open, close or lock the casement.

Where swinging screens are to be used with roller shades or drapery brackets the casement should be specified with a row of fixed lights at the top. Otherwise the drapery fixtures may prevent the screen from swinging open.

Screens need not be purchased with the casements as they may be installed months afterward.

Fenestra Inside Storm Windows

Inside Storm Window—without Sill Ventilator



Inside Storm Window with Open In Sill Ventilator

Fenestra Inside Storm Windows eliminate condensation and frost under all ordinary circumstances by creating a dead air space about ¾" wide between the Storm Window (inside) and the Casement (outside). They also reduce heat loss through the windows by about 60% and therefore save fuel and reduce the load on air-conditioning equipment.

The Storm Window itself is a frame of lightweight, cold rolled, tubular steel with corners mitered, welded and reinforced. It is shipped glazed with double strength glass in which is a circular opening to accommodate the casement locking handle. Around the handle opening and around the entire outside frame of the Storm Window weathering seals of extruded rubber are fitted so that when the Storm Window is in place it covers and seals the entire opening.

The Storm Window fits against the casement exactly like the inside screen (screen and screen clips having been removed) and is held by wedge clips applied from the inside. It is easily removed with a screw driver, for summer storage.

If specified, the Storm Window can be supplied with a Tiltin ventilator at the sill, providing about a 3" opening for restricted ventilation.

Few houses need Storm Windows at every window. Usually they are applied on the side of the house facing the prevailing wind or in rooms most used in winter activities.

Outside view of Fenestra Casement equipped with Inside Storm Window

But Don't Fenestra Cost More?

Fenestra Casements, purchased in Maine or in California are made in the same way, designed from the same material, finished identically, carry the same hardware. The buyer has the benefit of a nationally standardized quality and value. The prices will be the same subject to slight variation in transportation charges.

Some makers of windows of the usual Double Hung Type also have a national standard, but there are many windows on the market made by small local manufacturers and these differ one from another in grade of materials, in design, in workmanship and particularly in price. The customer has almost nothing by which to measure the quality of his purchase in proportion to the price he pays.

For this reason, it is difficult to compare the cost of Fenestra with the cost of other windows.

The only way to be certain as to which costs more and which costs less is to secure definite bids on all the windows for your own particular home and then make a comparison.

In getting such bids, do not be content with lump sum totals. Insist that these totals be broken down into the various items of cost. This may seem to be a useless bother, but it is apt to disclose hidden opportunities for saving a good sized sum of money.

Most people, you know, think of a wood window as nothing more than a frame and two sash. This is natural, for these items are the largest and most prominent pieces.

But in addition to frame and sash, other less obvious materials are needed: weights and cord and screens, for instance, and the "interior trim" which includes casings, backbands and stops at the head and both jambs of the window as well as a "stool" and an "apron" at the sill.

Because this extra window material is often purchased along with other things such as baseboards, door trim and picture mouldings which have nothing to do with windows, all of them are frequently lumped together under a single item of cost called "*Mill Work*."

You can easily see, therefore, that unless you insist on getting separate prices on all of the window materials, something is very apt to be omitted from your wood window figure.

It is an astonishing fact that the material for a single-frame Double Hung Wood Window is sometimes delivered in as many as 29 pieces.

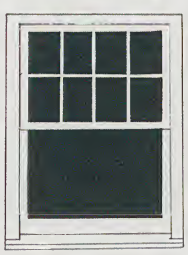
To carefully fit and assemble all of these pieces requires no small amount of carpenter labor, but this labor is often included with the time employed in hanging doors, fitting baseboards, etc. —all under the heading of "*Finish Carpentry*."

Even the General Contractor seldom knows how long it takes to assemble a single window or how much "Installation Labor" should be charged against the windows in a house.

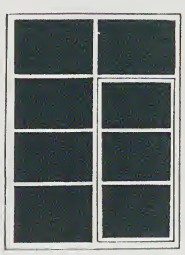
But this item of "Installation Labor" is important. In the first place, a window is of no use to anyone until it is installed in a building. Therefore, "Installation Labor" is properly a part of the window cost. In the second place, Double Hung Wood Windows are delivered in many pieces and require much installation labor while Fenestra Steel Casements are delivered

Comparison Between Fenestra Casement (Economy Type 4416) and Typical, Single Frame, Double Hung Window

Double Hung



Fenestra



	Double Hung	*Fenestra*
Cost of Frame and Sash (Open)	$6.20	$6.66
Cost of other materials	4.00	6.56*
Installation Labor	6.15	1.75
TOTAL COST	$16.35†	$14.97†

*Includes steel casing and metal screen.
†Glass and Glazing and Freight extra, depending on local conditions.

Wall Space Occupied	13 sq. ft.	13 sq. ft.
Light area provided	8 sq. ft.	10.7 sq. ft.
Cost per sq. ft. of Light	$2.21	$1.40

Note that each window occupies 13 sq. ft. of wall space but the Fenestra Casement gives 2.7 sq. ft. or 33⅓% more light although it costs less money. Since the admission of light is one of the chief reasons for the use of windows, it is fair, we think, to emphasize the fact that light through the Double Hung Window costs $2.21 a sq. ft. while light through the Fenestra Casement costs $1.40 a sq. ft.

The Answer is "No, Sometimes Less"

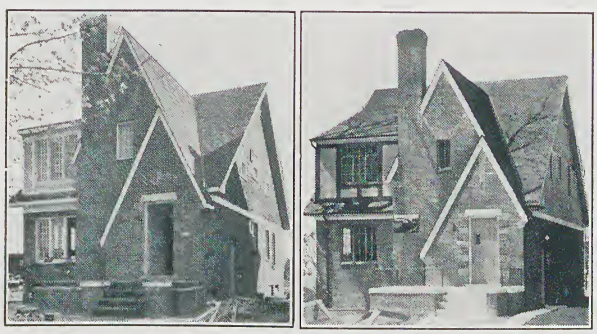
almost completely assembled (sash fitted, hung and painted) and require very little installation labor.

Here, then, is a chance for saving—an opportunity that is often completely overlooked.

From estimates made by many contractors who have sent us figures on Double Hung Window costs, we have compiled the comparisons at the bottom of these two pages. They are sufficient, we think, to demonstrate that:

A Fenestra Steel Casement may cost MORE than a Double Hung Window as regards Frame and Sash and even as regards Total Material Cost, but may still cost LESS than the Double Hung window when Total Installed Costs are considered.

We do not say this is always true, but since the windows in any house run about 2% or 3% of the total house cost, we think most people will agree that the possibility of such a saving is well worth investigating.



The pictures above show two houses built by the same contractor from the same set of plans. They are identical except that one has Fenestra Casements while the other has not. Comparative costs showed that the windows not Fenestra cost $320.86. The Fenestra Casements cost $283.21.

If you want to get down to finer details, you can get your contractor to set down his own costs after each of the following items:

DOUBLE HUNG WINDOWS	FENESTRA STEEL CASEMENTS
Sash and Frame (33%)	**Sash and Frame (47%)**
One Frame	Fenestra Casement (unglazed)
Two Sash (unglazed)	
Other Material (37%)	**Other Material (30%)**
Weights	Metal Screen
Cord	Heel Casing
Lift and Lock	Glass and Putty
Stool and Apron	
Inside Trim	
Glass and Putty	
Full Screen	**Labor Costs (23%)**
Weatherstrips	Set and Plumb Casement
	Glaze
Labor Costs (30%)	Paint (1 coat)
Set, Plumb and Brace Frame	Paint Casing (2 coats)
Fit and Hang Sash	Attach Hardware
Caulk Frame	
Fit and Attach Inside Trim	
Fit and Attach Stool and Apron	
Glaze Sash	
Attach Hardware	
Fit and Hang Screen	
Fit and Attach Weatherstrips	
Paint Sash (2 coats)	
Paint Trim (3 coats)	
Paint Stool and Apron (3 coats)	
Paint Screen (2 coats)	
Refit Sash After Completion	

Any contractor who will set down all his costs on windows installed, will be surprised,—first, to discover how much he actually does pay for windows of any kind; second, to discover how economical steel casements really are.

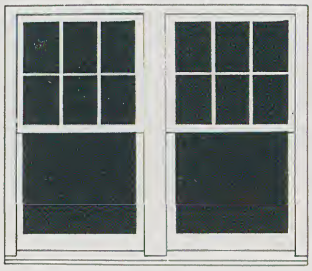
Comparison Between Fenestra Casement (Economy Type 6426) and Typical Double Frame, Double Hung Window

	Double Hung	*Fenestra*
Cost of Frame and Sash (Open)	$10.00	$11.47
Cost of other material	6.83	9.65*
Cost of Installation Labor	9.85	2.25
TOTAL COST	$26.68†	$23.37†
Wall Space Occupied	27 sq. ft.	20 sq. ft.
Light Area Provided	16 sq. ft.	16 sq. ft.
Cost per sq. ft. of Light	$1.61	$1.45

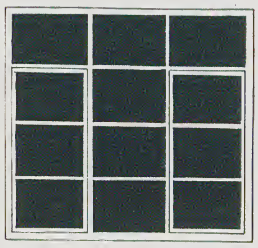
*Includes steel casing and metal screen.
†Glass, Glazing and Freight extra, depending on local conditions.

Note that here the Light Area of the two windows is the same but the Double Hung Window occupies 7 sq. ft. or 35% more wall space.

Double Hung

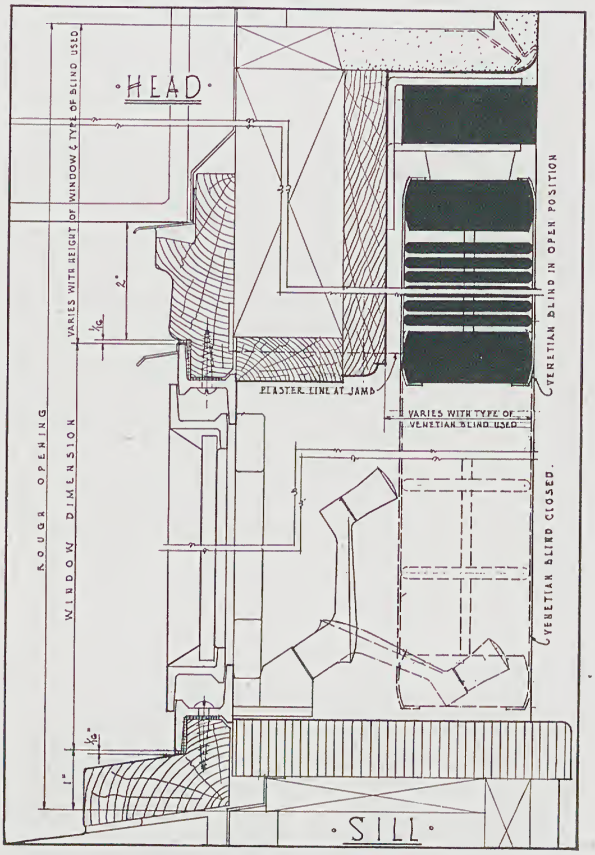


Fenestra



Venetian Blinds are Popular!

Venetian Blinds raised to the top of the window



The use of "Venetian Blinds" in connection with overdrapery seems to be increasing and many of the new, modern homes have eliminated the roller shade in favor of these window coverings of thin slats—some of them highly decorated —which appear to have somewhat more flexibility.

When "Venetian Blinds" are used, the slats may be tilted open or closed even when the blind is lowered, thus affording control of light and ventilation. A pull cord at the jamb raises the blind to the top of the opening if desired.

In a raised position, the "Venetian Blind" requires considerably more space than does a roller shade. Usually a portion of the upper glass light is covered. If desired, a reveal may be built above the window into which the blind may be drawn as indicated by the drawing above. This must of course be designed when the house is built.

Venetian Blinds on the face of the wall
Drapes and valance will cover

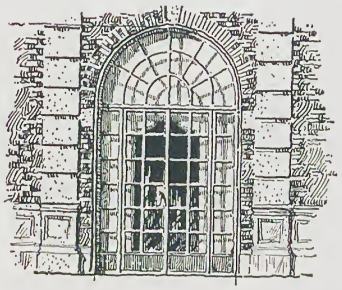
Fenestra French Doors are Available

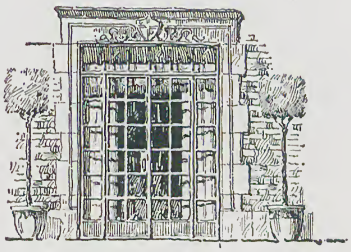
Fenestra French Doors may be had in keeping with the Fenestra Casements. These doors are designed for use singly or combined either with Fenwrought or Fencraft types. Frequently the doors are centered, with side lights and curved or square transoms attached.

Each door has two swing leaves fitted with three steel friction butts. The inactive leaf has bronze head and sill bolts. The active leaf has a bronze lock, aluminum cased with thumb latch on the inside and bronze handles on both inside and outside. Cylinders on both sides or on the outside only may be had if specified.

While the standard type of Fenestra Casement Door is not equipped with a threshold, an extruded bronze auxiliary threshold can be furnished as an extra.

French Doors are not recommended for front entrances.





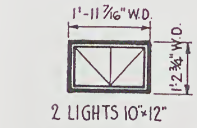
Almost Any Glass May Be Used

Fenestra Steel Windows always are priced on an unglazed basis and shipped without glass. Glass and putty can be purchased locally from almost any glass or paint store. Be sure to get steel window putty. This contains litharge, which makes it stick to steel.

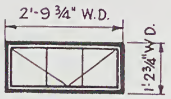
Plate glass is of course best and also most expensive. Double strength glass usually will do but single strength glass is not recommended. Of course, special glass may be used if desired, including "health glass" or "diffusing glass" or others.

Fenestra Steel Basement Windows

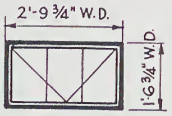
SOLD EXCLUSIVELY THROUGH DEALERS



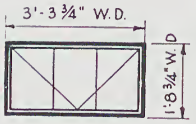
2 LIGHTS 10"×12"



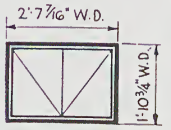
3 LIGHTS 10"×12"



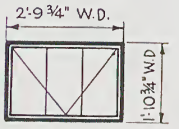
3 LIGHTS 10"×16"



3 LIGHTS 12"×18"



2 LIGHTS 14"×20"



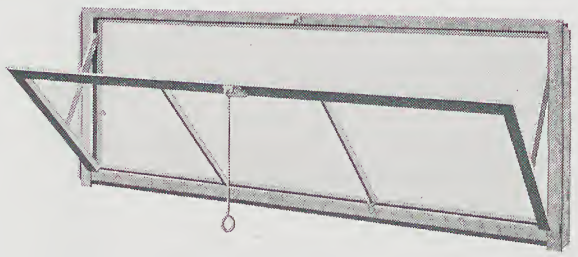
3 LIGHTS 10"×20"

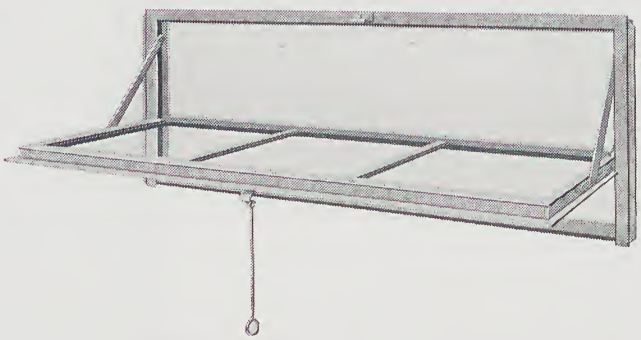
Built from Casement sections. Both frame and ventilator pivot ended and welded at at all four corners. Two point flat contact weathering all around the opening when vent is closed. Weather protected even when open.

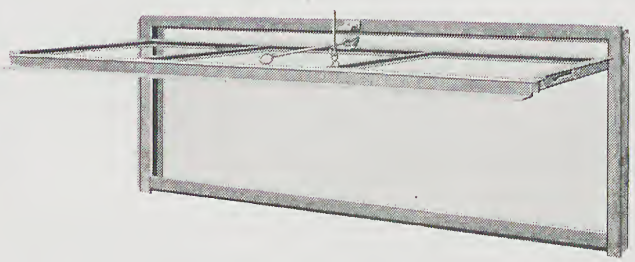
Vents carried on steel balance arms, open to any one of three positions. Easily removable when desired. Spring latch at head easily operated from floor by a 10″ operating rod. A 14-gauge steel fin welded outside each jamb member imbeds in the masonry and forms a guide for mason in laying up both the inside and the outside of the wall.

Steel framed, bronze mesh screen available where specified. Attached in a jiffy with an ordinary screw driver.

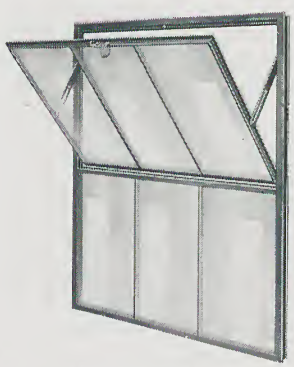
Vertical mullions may be had for joining two or more windows side by side in the same opening.







The Fenestra Utility Window


"Utility" Window

Made of casement sections with the lower lights fixed. The ventilator is one-light high, tilts in at the top and is held by side arms. A spring catch at the head automatically locks the window when closed. Made in fixed or ventilated types in one size only—3′3¾″ in width by 3′7¼″ in height.

Especially adapted to provide light in basements where houses are set close to the grade. The lower panes extend below the grade and a grating over the areaway makes the window appear one-light high as viewed from the outside.

Utility Windows are also desirable for use in private garages, public garages, filling stations, stores, shops and farm buildings. The tiltin ventilator does not interfere with the use of space directly below the window and it admits abundant ventilation without any direct drafts.

Used in these Architects' Own Homes

Norman Home of Mr. A. W. Coote, Architect,
Great Neck, L. I., N. Y.

Bungalow Home of Mr. H. W. Cordes, Architect,
Cincinnati, Ohio

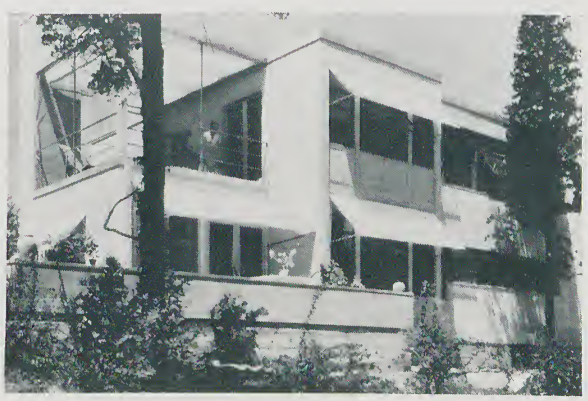
From among architects who testify to the value of Fenestra Casements by using them in *their own homes*, we have selected the following as typical of Fenestra's wide distribution:

Mr. Sidney L. Adler, Mobile, Ala.
Mr. Arthur E. Allen, Garden City, L. I., N. Y.
Mr. William B. Betts, Ravinia, Chicago, Ill.
Mr. A. C. Borzner, Beachwood Park, Pa.
Mr. E. H. Clark, Winnetka, Ill.
Mr. W. C. Coates, Jr., Fresno, Calif.
Mr. A. W. Coote, Great Neck, L. I., N. Y.
Mr. H. W. Cordes, Cincinnati, Ohio
Mr. N. C. Cox, Cleveland, Ohio
Mr. C. W. Ditchy, Northwood, Detroit, Mich.
Mr. W. W. Drummey, Jamaica Plain, N. Y.
Mr. R. R. Fields, Rosemont, Pa.
Mrs. Beulah Fleming, Albuquerque, N. M.
Mr. Carl E. Jefferson, Oakland, Calif.
Mr. W. E. Kelly, Portland, Ore.
Mr. Edwin Kline, Great Neck, L. I., N. Y.
Mr. Louis R. Moss, Kenwood, Md.
Mr. John R. Parmalee, Nashville, Tenn.
Mr. Lucius A. Phillips, Los Angeles, Calif.
Miss Rachel C. Raymond, Belmont, Mass.
Mr. J. S. Reed, Birmingham, Ala.
Mr. George M. Riddle, Long Beach, Calif.
Mr. Robert Tappan, Forest Hills, L. I., N. Y.
Mr. Luther E. Uhlig, Short Hills, Dayton, Ohio
Mr. Wm. B. Wiener, Shreveport, La.

Fenestra Casements have been used throughout in many prize-winning home designs submitted in architectural competitions and in national contests featuring beautiful and practical houses actually built.

Colonial Home of Mr. Arthur E. Allen, Architect,
Garden City, L. I., N. Y.

Modern Home of Mr. W. B. Wiener, Architect.
Shreveport, La.



Modern Home of Miss Rachel C. Raymond, Architect,
Belmont, Mass.

Some Notable Fenestra Installations

London Terrace, New York City
Farrar & Watmough, Architects

Tudor City, New York
F. F. French, Designer

International House, Chicago U., Chicago, Ill.
Holabird & Root, Architects

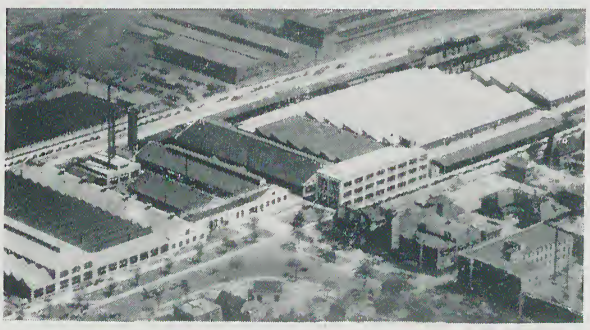
Meany Hotel
Seattle, Wash.
R. C. Reamer, Arch.

Fenestra Windows have been supplied, not only as casements for residences but also in some of the finest apartments, hotels, schools, hospitals and office buildings in America and in almost every type of commercial and industrial structure. Notable installations include the famous Tudor City and London Terrace Apartments in New York City; the Meany Hotel, Seattle, Wash.; and Casa Riviera Apartments, Long Beach, Calif. International House at Chicago University is typical of a number of beautiful Club, Fraternity and Dormitory installations.

Casa Riviera
Long Beach, Calif.
R. D. King, Architect

It's Easy to Buy Fenestra Anywhere

Even though you may not know who handles Fenestra Products in your town, their purchase



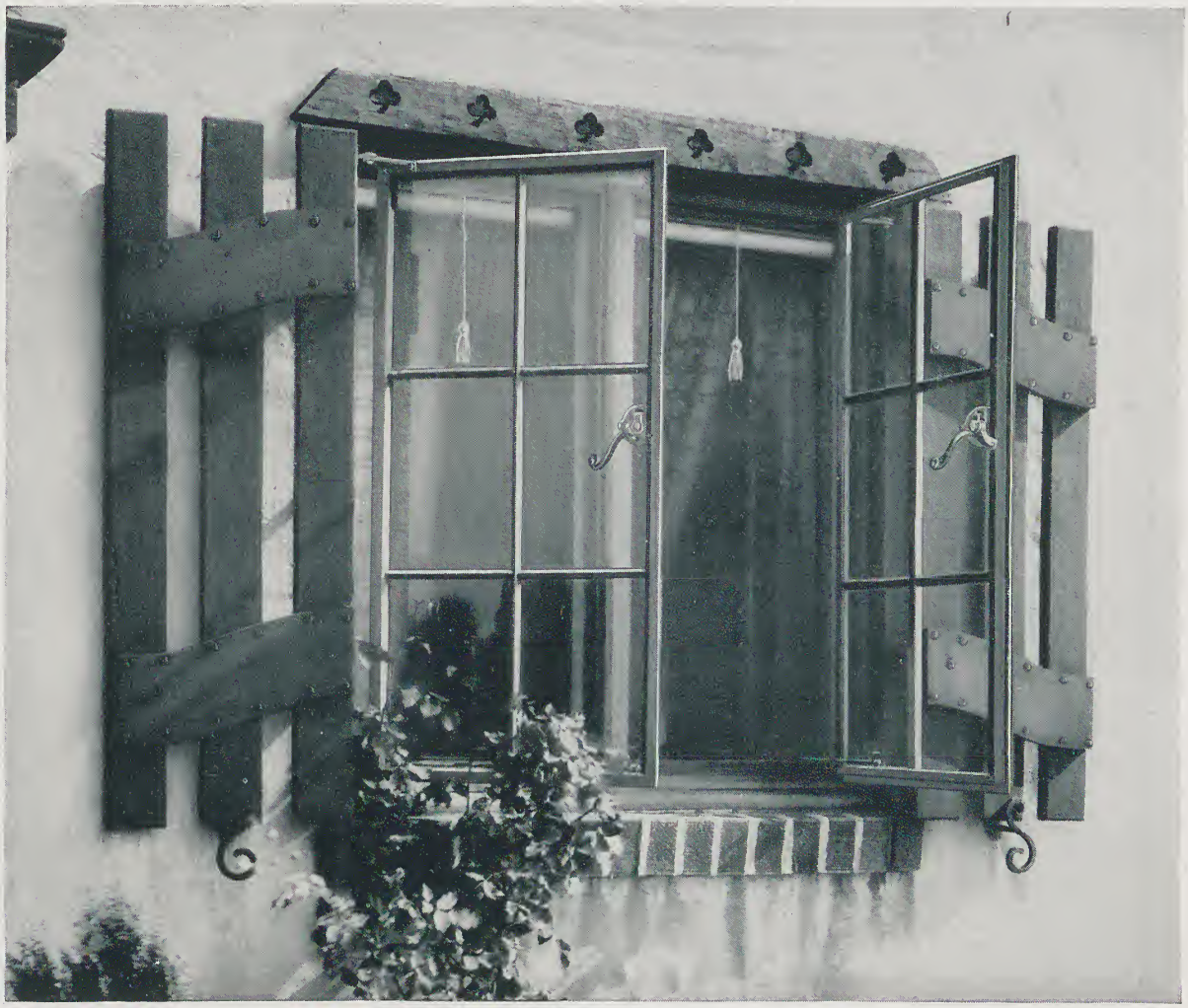
Plant and Main Office of Detroit Steel Products Co.

is not at all difficult. Just ask your architect to specify "Fenestra." If you have no architect, instruct your contractor to get an estimate on "Fenestra."

Almost all designers and builders know where to find our types, sizes and details in Sweet's Architectural and Sweet's Engineering Catalogs. Many of these men are in constant touch with our field representatives. If you prefer to write us direct, a card to our main office at 2250 East Grand Boulevard, Detroit, Michigan, will bring a prompt reply and will then be referred to the Fenestra field man nearest you.

The Detroit Steel Products Company, organized in 1904, is the oldest and largest manufacturer of steel windows in the United States.

Fenestra Products are marketed through District Offices and Agents located in approximately 200 cities and through hundreds of Dealers covering almost all towns of 10,000 or more. Well stocked warehouses, strategically located, and backed by factories at Detroit, Michigan, and Oakland, California, insure prompt shipments.



This catalog is prepared especially for YOU as a prospective home owner. Undoubtedly your Architect and Contractor are familiar with Fenestra Windows, but we shall be glad to give them details, layouts and prices on these windows for your particular home, if you care to send us their names and addresses.

DETROIT STEEL PRODUCTS COMPANY

2250 EAST GRAND BOULEVARD • • DETROIT, MICHIGAN

FENESTRA BONDERIZED STEEL CASEMENT WINDOWS

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